

Application No.: 10/714,400

Docket No.: 1519-038

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)

2. (currently amended) A backlighting system for a display apparatus, said backlighting system comprising:

at least one light source;

electronic componentry adapted to receive electrical power and to control the distribution of electrical power to the at least one light source;

at least one circuit board substrate on which the electronic componentry is mounted and including an arrangement of conductive tracks; and

electrical connection means provided in the circuit board substrate and connected to said conductive tracks,

wherein

said electrical connection means is directly electrically and physically connected to the at least one light source to conduct said electrical power distributed by the electronic componentry to said at least one light source; and as claimed in claim 1, wherein

said at least one circuit board substrate comprises a first circuit board substrate on which said electronic componentry is mounted and a second circuit board substrate including said electrical connection means; ~~which are directly electrically and physically connected to said at least one light source, wherein~~

said backlighting system further comprising further electrical connection means [[are]]

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provided between said first and second circuit board substrates.

3. (original) A backlighting system as claimed in claim 2, wherein the light source is provided substantially in a display plane and the first circuit board substrate is substantially planar and positioned over the at least one light source substantially parallel with the display plane.

4. (original) A backlighting system as claimed in claim 3, wherein the second circuit board substrate is arranged substantially perpendicularly to the plane of the first circuit board substrate and the display plane.

5. (previously presented) A backlighting system as claimed in claim 2, wherein said at least one light source comprises a plurality of tubular light sources having proximal and distal ends, the tubular light sources aligned in a row and substantially in the same plane as the first circuit board substrate, the distal ends of the plurality of tubular light sources connected together and to a ground connection of the electronic componentry and the proximal ends connected to receive electrical power from the electronic componentry through the electrical connection means.

6. (previously presented) A backlighting system as claimed in claim 2, wherein said first circuit board substrate includes at least one substantially straight edge adjacent to which said further electrical connection means is provided, the further electrical connection means including mechanical connection means provided on the first circuit board substrate along the substantially straight edge and including conductive pin means providing at least part of said further electrical connection means.

7. (original) A backlighting system as claimed in claim 6, wherein said mechanical connection means comprise standard board to board connectors.

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8. (currently amended) A backlighting system for a display apparatus, said backlighting system comprising:

at least one light source;

electronic componentry adapted to receive electrical power and to control the distribution of electrical power to the at least one light source;

at least one circuit board substrate on which the electronic componentry is mounted and including an arrangement of conductive tracks; and

electrical connection means provided in the circuit board substrate and connected to said conductive tracks,

wherein

said electrical connection means is directly electrically and physically connected to the at least one light source to conduct said electrical power distributed by the electronic componentry to said at least one light source; and as claimed in claim 1, wherein

said electronic componentry includes a plurality of control means, each of which controls ~~control~~ the distribution of power to more than one light source, each control means receiving feedback of the electrical power consumption of its selected number of light sources and adjusting the power supplied to the selected number of light sources accordingly.

9. (original) A backlighting system as claimed in claim 8, wherein the electronic componentry includes inverters, each control means controls more than one inverter and each inverter powers more than one light source.

10. (currently amended) A backlighting system as claimed in claim 8, further comprising [[a]] cooling means and wherein said control means also receives feedback on a temperature within the display apparatus and adjusts the amount of cooling provided to at least said selected number of light sources by said cooling means accordingly.

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11. (currently amended) A backlighting system as claimed in claim [[1]] 2, wherein the display apparatus is a multi-layer display.

12-20. (canceled)

21. (new) A backlighting system as claimed in claim 2, wherein said electronic componentry includes a plurality of control means, each of which controls the distribution of power to more than one light source, each control means receiving feedback of the electrical power consumption of its selected number of light sources and adjusting the power supplied to the selected number of light sources accordingly.

22. (new) A backlighting system for a display apparatus, said backlighting system comprising:

at least one light source;

electronic componentry adapted to receive electrical power and to control the distribution of electrical power to the at least one light source;

at least one circuit board substrate on which the electronic componentry is mounted and including an arrangement of conductive tracks, and

a first electrical connection element provided in the circuit board substrate and connected to said conductive tracks;

wherein

said first electrical connection element is directly electrically and physically connected to the at least one light source to conduct said electrical power distributed by the electronic componentry to said at least one light source; and

said at least one circuit board substrate comprises a first circuit board substrate on which said electronic componentry is mounted and a second circuit board substrate including said first electrical connection element;

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said backlighting system further comprising a second electrical connection element provided between said first and second circuit board substrates.

23. (new) The backlighting system as claimed in claim 22, wherein the light source is provided substantially in a display plane and the first circuit board substrate is substantially planar and positioned over the at least one light source substantially parallel with the display plane.

24. (new) The backlighting system as claimed in claim 22, wherein the second circuit board substrate is arranged substantially perpendicularly to the plane of the first circuit board substrate and the display plane.

25. (new) The backlighting system as claimed in claim 22, wherein said at least one light source comprises a plurality of tubular light sources having proximal and distal ends, the tubular light sources aligned in a row and substantially in the same plane as the first circuit board substrate, the distal ends of the plurality of tubular light sources connected together and to a ground connection of the electronic componentry and the proximal ends connected to receive electrical power from the electronic componentry through the first electrical connection element.

26. (new) The backlighting system as claimed in claim 22, wherein said first circuit board substrate includes at least one substantially straight edge adjacent to which said second electrical connection element is provided, the second electrical connection element including a mechanical connection element provided on the first circuit board substrate along the substantially straight edge and including a conductive pin providing at least part of said second electrical connection element.

27. (new) The backlighting system as claimed in claim 26, wherein said mechanical connection element comprises standard board-to-board connectors.

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28. (new) The backlighting system as claimed in claim 22, wherein said electronic componentry includes a plurality of control elements, each of which controls the distribution of power to at least two light sources, receives feedback of the electrical power consumption of said respective at least two light sources, and adjusts the power supplied to said respective at least two light sources accordingly.

29. (new) The backlighting system as claimed in claim 28, wherein the electronic componentry includes inverters, each said control element controls more than one of said inverters, and each said inverter powers more than one light source.

30. (new) The backlighting system as claimed in claim 28, further comprising a cooling element and wherein each said control element also receives feedback on a temperature within the display apparatus and adjusts the amount of cooling provided to said respective at least two light sources by said cooling element accordingly.